An Evaluation of Working Capital Management: An Overview

Dr. JOSEPHINE DAISY

Associated Professor & Head, Department of Commerce (CA), Mahendra Arts and Science College, Kallippatti, Namakkal (Dt)

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ABSTRACT

In the present environment all organizations are trying to cut the cost of the product and also trying to improve the profitability of organization. For cutting the cost there exist various ways. One way is to do efficient working capital management. If working capital management is sound then there will be minimum idle capital and ultimately it reduces the interest burden of organization and it will help to improve the profitability of organizations. In the present paper an attempt has been made to study the relationship of working capital management and profitability accounting of Narasimha Mills Pvt. Ltd. For the purpose of finding this relationship. Ten years data has been used. From the result of multivariate regression it is found that all independent variables are found significant. It means all the components of working capital management are highly influencing on the profitability of organizations.

INTRODUCTION

According to classical school of thought, working capital decision does not affect the profitability and risk of the firm. On the contrary, according to Modern school of thought, working capital decision materially affects the profitability and risk of the firm. A firm must have adequate working capital. It should be neither excessive nor inadequate. Both situations are dangerous. Excessive working capital means the firm has idle founds which earns no profit for the firm. Inadequate working capital means the firm does not have sufficient funds for running its operations, which ultimately result in production interruptions and lowering down the profitability. Here it would be interesting to understand the relationship between working capital, risk, and return. It is generally accepted that higher levels of working capital decrease the risk and profitability. This principle is based on the following assumptions:

1. There exists a direct relationship between risk and profitability – higher the risk, higher is the profitability and vice versa.
2. Current assets are less profitable than the fixed assets.
3. Short term funds are less expensive than long-term funds.

On account of the above principle, an increase in the ration of current assets to total assets would result in decline in the profitability of the firm. This is because investment in current assets is less profitable than that in the fixed assets. However, an increase in this ratio would decrease the risk of the firm becoming technically insolvent. On other hand, a decrease in the ratio of current assets to total assets would increase the profitability of the firm because investment in fixed assets is more profitable than the investment in current assets. However, this will increase the risk of the firm becoming technically insolvent on account of its possible inability of meeting its commitments in time due to shortage of funds Profitability is an indication of the efficiency with the operations of a business. Poor operational performance leads to poor sales and in turn affects profitability. Earnings are the essential requirements to continue the business. So we can say that a healthy enterprise is that which has good profitability.

1.1 Review of Literature

Brief review of the literature done by the researchers is presented as follows:

The study conducted by Smith (1980) suggests that Working capital management played an important role in the profitability and value of the firm. Blinder and Manccini (1991) Study indicated that maintaining high inventory levels reduces the cost of possible interruptions in the production process, or loss of business due to the scarcity of products, reduces supply costs and protects against price fluctuations, among other advantages. The relation between the cash conversion cycle and profitability for a sample of firms listed on the US stock exchange during the period 1974-1994 has been analyzed by Shin and Soenen (1998). Their results show that reducing the cash conversion cycle to a reasonable extent increases firms' profitability. Deloof (2003) analyses a sample of large Belgian firms during the period 1992 -1996. His results confirm that Belgian firms can improve their profitability by reducing the number of day's accounts receivable and reducing inventories. Moreover, he finds that less profitable firms wait longer to pay their bills.

Most of the studies related to working capital and profitability have been conducted in developed countries. Few studies conducted in India are summarized here; Bhayani (2004) has conducted a study on working capital and profitability of cement industry and found that profitability is highly influenced by working capital. Linkage between asset management and profitability of Indian Industry has been conducted by Narware P.C. (2004), Debasis and Debdas (2005) found that long-term asset management made positive as well as very significant contribution towards improvement of corporate profitability. Chakraborty P.K. (2005), Malik A.K. and Sur D. (1998, 1999) has conducted a study on the effect of working capital management on profitability.

1.2 Objectives of the Study

(i) To examine the impact of working capital on profitability.
(ii) To study the impact of working capital on Return on Investment.

METHODOLOGY OF THE STUDY

2.1 Nature of the Study

It is study that restricts its focus to analyzing the factors that may affect the working capital of the Narashima Mills Pvt. Ltd. The research methodology includes an analysis of the financial statements of Narashima Mills Pvt. Ltd for ten years and is aimed at investigating the perceived importance of the firm's success.

2.2 Data Collection

A case study in interrelation has been made by using data 'from financial statement of the company and from capitaline database. Other information regarding this study has been collected from different websites and magazines.

2.3 Period of Study

The study covers a period of ten years from 2004 – 2005 to 2014 – 2015.

2.4 Tools Used

For analyzing data simple mathematical tools like rations, percentages have been used. The ratios relating to working capital management which have been selected and computed for the study are as follows:

- (a) Working Capital Ratio (WCR) = Current Asse3ts/ Current Liabilities.
- (b) Quick Asset Ratio (QR) = Current Assets – Inventory) / (Current Liabilities – Bank Overdraft)
- (c) Current Assets Ratio (m CR) = Current Assets/Current Liabilities.
- (d) Current Assets to Sales Ration (CTSR) = Current Assets/Sales.
- (e) Working Capital Turnover Ratio (WTR) = Sales / Working Capital.
- (f) Inventory Turnover Ratio (ITR) = Sales / Inventory
- (g) Debtors Turnover Ratio (DTR) = Sales / Total Debtors
- (h) Cash Turnover Ratio (CTS) = Sales / Cash

For assessing the association between working capital management and profitability of the company, statistical techniques like Pearson's simple correlation analysis and multiple regression analysis have been applied at appropriate places. The "t" test has been used to judge whether the computed correlation and regression coefficients are significant or not. For determining the sensitivity of ROI to change in the level of working capital, the working capital leverage has been computed. For computing WC leverage the formula, gross working capital divided by total assets investment is used. All statistical computations have been done through SPSS.

FINDINGS AND DISCUSSION

In Table 1 an attempt has been made to study the effect of working capital on profitability by using Karl Pearson's correlation coefficient between ROI and the selected rations related to working capital management. This table indicates the correlation coefficient between ROI and CR is – 0.133. It shows that there is a low degree of negative association between the profitability and the current ratio of the company.

Table 1
Simple correlation Between Elected Ratios Relating to Working Capital Management and ROI

N	CR	QR	WCR	CTSR	WTR	ITR	DTR	CTR	ROI
2004-05	3.96	2.02	2.40	1.67	2.00	7.23	4.69	48.50	16.04
2005-06	3.07	2.34	1.84	1.54	2.73	6.84	4.24	44.00	13.42
2006-07	3.23	2.06	1.49	1.56	2.26	5.66	4.53	18.30	19.27
2007-08	3.57	1.92	1.64	1.59	2.35	4.74	5.17	12.80	16.15
2008-09	3.20	1.17	1.95	1.44	1.74	5.47	5.93	16.90	8.71
2009-10	1.96	1.35	0.96	1.41	0.68	7.32	4.76	23.91	4.15
2010-11	2.34	1.60	1.34	1.19	1.12	5.92	4.57	98.11	27.04
2011-12	2.40	1.64	1.40	1.17	1.19	6.78	4.41	84.92	12.74
2012-13	2.44	1.58	1.44	1.09	1.32	5.72	5.08	57.93	25.30
Correlation Coefficient (r)	0.133	0.90	-0.133	-0.460	0.088	-0.418	-0.169	0.479	

Source: Computed from Annual Reports of the company

The value of the correlation coefficient is found to be insignificant at 5 per cent level. Secondly, the correlation between ROI and QR is 0.90 which is also found to be insignificant at 5 per cent level. It reveals that there is no correlation between the two variables. It is evident from these two ratios that the lower the company's margin of safety to the short term creditors, the greater is the profitability of the concern. Thirdly, the correlation coefficient between ROI and WCR is -0.133. It implies that there is negative correlation between profitability of the company and the ratio of working capital. At 5 percent level, the value of the correlation coefficient is found to be insignificant as mentioned in Table 2. This is in consistency with earlier results as CR and QR. Financing through current liabilities is definitely less costly than long term financing source. Fourthly, the correlation coefficient between CTSR and ROI is -0.460 which is found to be insignificant between ROI and WTR is -0.088 which indicates a negative correlation between these two variables. This value is found to be insignificant at 5 percent level. Sixthly, the correlation coefficient between ROI and ITR shows negative correlation of -0.418. The coefficient is found to be insignificant at 5 per cent level. The correlation coefficient between ROI and DTR also shows a negative correlation of -0.169. This value is found to be insignificant at 5 percent level. Lastly, the coefficient between ROI and CTR depict moderate degree of positive association of 0.479. This is found to be significant at 5 percent level. Multiple correlation and multiple regression techniques have been applied to study the joint influence of the selected ratios relating to working capital management on the profitability of the company. For the purpose of selection of variable in this analysis, the correlation matrix representing the correlation coefficients between the explanatory variables have been structured in Table 3. This table shows that there is a high degree of correlation between WCR and CR (0.889), between WTR and QR (0.801) and between CTSR and WTR (0.728) for this reason WCR.CR. WTR. CTSR and QR have been taken into account while fitting the regression line.

Table 2
Correlation Matrix

	CR	QR	WCR	CTSR	WTR	ITR	DTR	CTR	ROI
CR	1.00								
QR	0.576	1.00							
WCR	0.889**	0.449	1.00						
CTSR	**0.813****	0.563	0.619*	1.00					
WTR	0.822**	0.801**	0.681**	0.728*	1.00				
ITR	-0.177	-0.139	0.059	0.081	-0.224	1.00			
DTR	-0.175	-0.622	-0.181	-0.011	-0.076	-0.554	1.00		
CTR	-0.414	-0.037	-0.151	-0.655*	-0.407	0.285	-0.473	1.00	
ROI	-0.133	0.090	-0.133	-0.460	-0.088	-0.418	-0.169	0.479	1.00

** Correlation is significant at the 0.01 level (2-tailed).

- Correlation is significant at the 0.05 level (2 – tailed).
- Source: Computed from Annual Reports of the company

The regression model used in this analysis is: $ROI = b_0 + b_1 QR + b_2 CTR + b_3 DTR + b_4 ITR + b_5 CR$

Where $b_0, b_1', b_2', b_3', b_4$ and b_5 are the parameters of the ROI line. Table 3 and Table 4 depicts the multiple correlation coefficients and the regression coefficient of ROI on QR, CTR, DTR, ITR and CR showing the strength of relation between the dependent variable, ROI and all the independent variables on the profitability of the company, When QR increased by one unit, the ROI decreased by minus 0.575 units. When one unit increases in CTR, the profitability increased by 0.42 units which was statistically significant. When DTR increased by one unit, the ROI of the company stepped down by 5.695. For one unit increase in ITR, the profitability declined by 6.868. The one unit increase in CR showed 0.392 units increase in ROI. On QR, CTR, DTR, DTR, ITR and CR is 0.794. It signifies that the profitability of the company was highly influenced by QR, CTR, DTR, ITR and CR. It is also evident from the value of R2 that the independent variables QR, CTR, DTR, ITR and CR contributed 0.630 percent of variations in the profitability of the company.

Table 3
Multiple Correlations and Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta	B	Std. Error
	(Constant)	80.074	115.020		0696	0.525
	QR	-0.575	21.820	-0.028	-0.026	0.980
1	CTR,	0.142	0.107	0.538	1.329	0.255
	DTR	-5.695	16.658	-0.360	-0.342	0.750
	ITR	-6.868	3.911	-0.761	-1.756	0.154
	CR	0.392	8.619	.34	0.045	0.966

	Multiple R = 0.794[a]	R² = 0.630	Adj R² = 9.167	S.E. of R = 6.96451

a. Dependent variable: ROI &

b. Predictors: (Constant), CR, DTR, ITR, CTR, QR

Source: Computed from Annual Reports of the company.

Table 4
Correlation Matrix

	CR	QR	WCR	CTSR	WTR	ITR	DTR	CRT	ROL
CR	1.00								
QR	0.576	1.00							
WCR	0.889	0.449	1.00						
CTSR	0.813	0.563	0.619	1.00					
WTR	0.822	0.801	0.681	0.728	1.00				
ITR	-0.177	0.139	0.059	0.081	0.224	1.00			
DTR	0.175	-0.622	0.181	0.011	-0.076	-0.554	1.00		
CTR	-0.414	-0.037	-0.151	-0.655	-0.407	0.285	-0.473	1.00	
ROI	-0.133	0.090	-0.133	-0.460	0.088	-0.418	-0.169	0.479	1.00

Table 5
AVOVA Results for ROI

Model	Sum of Squares	Df	Mean Square	F	Sig.
1	330.159	5	66.032	1.361	.394[b]
	194.018	4	48.504		
	524.177	9			

Table 6
Multiple Correlations and Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	80.074	115.020		.696	.525
	QR	-.575	21.820	-.028	-.026	.980
	CTR	.142	.107	.538	1.329	.255
	DTR	-5.695	16.658	-.360	-.342	.750
	ITR	-6.868	3.911	-.761	-1.756	.154
	CR	.392	8.619	.034	.045	.966
	Multiple R = 0.794[a]	R² = 0.630		Adj R² = 0.167	S.E of R = 6.96451	

CONCLUSION

The study on the interrelation between the selected ratios in the arrears of working capital management and profitability of the company revealed both negative and positive association. Out of the nine ratios selected for the study, two ratios, namely QR and CTR registered positive correlation with the selected profitability ratio, ROI. Among these two ratios, the correlation coefficient between QR and ROI and between CTR and ROI were found to be insignificant at 5 per cent level. The remaining seven ratios, namely CR, WCR, CTSR. WTR, DTR and ITR witnessed negative association with profitability ratio.

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